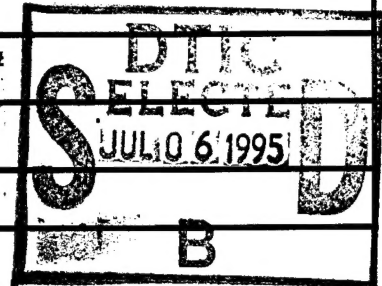


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14. Abstract As part of the Defense Technical Information Center's (DTIC) continuing efforts to increase the quality of service to our users, DTIC implemented a benchmarking project in August 1994. For the purpose of this report, benchmarking is defined as a structured process for evaluating the products, services, and work process of organizations that represent best practices for organizational improvement. The structure of benchmarking is provided by development of a step-by-step process model. After reviewing the published literature on benchmarking, DTIC decided to utilize a five-stage benchmarking process model. Each of the five stages will be briefly discussed. The scope of this benchmarking effort was limited to teleservice or customer service provided via the telephone.					
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Best Practices in Telephone Service

Final Report DTIC Benchmarking Team

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June 1995

SECTION 1

BACKGROUND

1.1 Introduction

As part of the Defense Technical Information Center's (DTIC) continuing efforts to increase the quality of service to our users, DTIC implemented a benchmarking project in August 1994. For the purpose of this report, benchmarking is defined as a "structured process for evaluating the products, services, and work process of organizations that represent best practices for organizational improvement." The structure of benchmarking is provided by the development of a step-by-step process model. After reviewing the published literature on benchmarking, DTIC decided to utilize a five-stage benchmarking process model. Each of the five stages will be briefly discussed.

1.1.1 Determine What to Benchmark

The first stage of the process is to define the specific subjects to be benchmarked. Mr. Molholm, DTIC Administrator, chose to employ benchmarking to determine and implement best practices in improving customer service to our users. As the focal point for all user inquiries and complaints, DTIC-B was the logical directorate from which to select the Process Owner. Process Owners manage the functions involved in the process that will be benchmarked. Ms. Lesser, DTIC-B Director, recommended Mr. Chris Cupp, Reference and Retrieval Services Division Chief, for the role of Process Owner. Mr. Cupp narrowed the scope to customer service provided over the telephone. "Teleservice" was chosen because the telephone is the front door to DTIC for many of our users. Consequently, it is crucial for DTIC's customer service representatives (CSR) to possess the human resource skills and technological tools necessary to remove any objections to delivering outstanding customer service.

1.1.2. Form Benchmarking Team

The process of selecting, orienting, and managing a benchmark team is the second major stage of the benchmarking process. Six individuals were selected to participate on the benchmarking team:

- Eva Adams - BCS
- Jim Apistolas - BCP
- Frank Greer - BR
- Tim McCleerey - BLS
- Mike Sullivan - ZT
- Grant Clark -RME.

The makeup of the team was determined by selecting two insiders to one outsider. Insiders are defined as people who currently work inside the process undergoing benchmarking. They come from the various functions involved in the process. Outsiders are defined as people that do not work in the process that's undergoing benchmarking. Training was provided by Mr. Clark on the fundamentals of benchmarking.

The team did a preliminary examination of DTIC's telephone customer service. DTIC has made improvements to its' teleservice in recent years. The 1-800 Toll Free Call Handling and the Customer Service Help Desk are prime examples. The addition of voice mail to DTIC is another. The DTIC-BR reorganization, that significantly improved phone coverage, is yet another. However, a clear picture of the effectiveness of DTIC's teleservice is unknown. No monitoring systems are in place to ensure quality service is being provided by CSRs or to gauge how satisfied the customer actually is with the service. In addition, there is no call distribution system in place to distribute efficiently and fairly the calls to the CSRs, and to collect management information. Finally, very little training is provided for existing personnel or new employees in teleservice.

1.1.3. Identify Benchmark Partners

The third stage of the process involves the identification of sources that will be used to collect benchmark information. Partners to benchmark with were identified through:

- Government Sources
- Subject Matter Experts
- Trade and Professional Organizations and Networks
- Publications (Databases)
- Employees, Customers, Suppliers.

Upon searching for benchmark partners, the team discovered a wealth of information on telephone customer service. Coincidentally, the team learned about a government consortium performing their own teleservice benchmark study. Under the auspice of the National Performance Review, the nine federal agencies benchmarked eight private sector organizations:

AT&T Universal Card Services
 American Express Travel Related Services
 Bell Canada
 Citibank
 Duke Power Company
 GE Answer Center
 Saturn
 USAA.

The benchmarking team established valuable POCs with members of the government consortium's team, and was able to obtain access to the data they collected.

Additionally, the team was able to obtain extensive information through the Defense Finance & Accounting Service (DFAS). DFAS's Customer Service and Performance Assessment Directorate had also recently benchmarked teleservice. DFAS had visited and collected data on three organizations: Florida Power & Light, GE Answer Center, and American Express Travel Related Services. The latter two organizations were also benchmark partners of the consortium study. To provide an understanding on why the organizations are recognized as "the best in business", a brief background of Florida Power & Light, GE Answer Center, and American Express Travel Related Services follows. Their best practices are used extensively in this report.

1.1.3.1 General Electric (GE) Answer Center

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The GE Answer Center was established in 1981 in response to changing consumer attitudes and expectations. GE studies found customers wanted more information about products, help in repairing products, rapid response to requests for assistance, and personalized treatment. A single 800-number was established to handle all inquiries. Today, the GE Answer Center is considered by many customer service experts to be the state-of-the-art 800-number operation.

The Answer Center operates 24 hours a day, 365 days a year. The center is staffed with 180 Customer Representatives, 30 Technical Representatives, a "resource-on-call" team of experienced representatives to handle difficult calls, and a special team of 12 individuals for training, coaching, and call observation. Approximately four million calls are received annually with each representative averaging 110 calls per day. The facility provides an excellent work environment with spacious work stations, break rooms, and meeting facilities. GE spends about \$10 million a year on the operation, but estimates the center generates sales far in excess of operating costs. Prevalent throughout the center are reminders of the GE vision "One team better and faster than anybody else in the world." People, the environment, and technology are viewed as the keys to success.

1.1.3.2 Florida Power & Light Company (FPL)

FPL provides service to approximately 3.2 million customers located throughout southern Florida. FPL's four regional customer service centers (located in Miami, West Palm Beach, Sarasota, and Daytona) handled over 8.4 million calls in the past year. South Florida experiences the highest rate of lightening strikes in the country, and it's a major challenge to FPL to maintain a high degree of customer satisfaction. FPL, winner of Japan's Deming Prize for Quality Management, has met this challenge through an industry leading, comprehensive customer service program. FPL's reputation as a leader in customer service is evidenced by the number of organizations that conduct benchmark visits with them. FPL has done considerable research into defining the customer attributes that drive customer satisfaction.

FPL focuses extensive research on customer service because they believe that market competition in the public utility arena is just around the corner. They envision in the near future, customers will have the option of choosing their utility company, and that perceptions of service delivery will be a key factor in that selection.

1.1.3.3 American Express (AMEX) Travel Related Services Company

In 1980, American Express pioneered the travel management services industry, bringing Corporate Card and Business Travel Services together into one business unit -- Travel Management Services. This consolidation resulted from the realization that providing quality customer service was necessary to maintain a competitive edge. Their research indicated customers wanted problems resolved with a single phone call.

Service quality has been an evolutionary process in AMEX. Prior to 1978, service quality was focused on the quality control methods of inspecting and correcting the work process in individual departments. The next stage in the evolutionary process was the development of a quality assurance program for tracking and reporting of performance results, and for recommending improvements to key external customer service processes. Since 1990 service quality has been governed by a strategic quality management program that focuses on performing quality measurement throughout

the organization, service delivery continually aligned with the changing expectations and priorities of their nearly four million cardholders (vice management driven), and training.

1.1.4 Collect and Analyze Benchmarking Information

The fourth stage of the five step benchmarking process is to collect and analyze benchmarking information. During this stage of the process, specific information-collection methods were selected. These methods were:

- Telephone Interviews
- Personal Meetings/ Site Visits
- Publications/ media.

The team collected information from the literature searches, government consortium study, DFAS study reports, telephone system contractors, and site visits. The collected information was then analyzed, and recommendations produced.

1.1.5 Take Action

The fifth and final stage is to take action. The action taken may range from the production of a report or presentation, to the production of a set of recommendations, to the actual implementation of change based, at least in part, on the information collected in the benchmarking investigation. The team's action plan consists of producing this report of the team's findings and recommendations and briefing the team's finding to management.

1.2 Overview

The report focuses on best practices in teleservice in three areas: human resource issues, technological issues, and performance measures. Each area is discussed individually in the following three sections. The fifth and final section discusses the group's recommendations. Threaded through each of the sections, the best practices have a consistent focus on the customer and an integration of the customers' needs into the organizations' management, technology and human resource systems. It is the group's hope that the information found herein can help bring about positive changes to DTIC's telephone customer service.

SECTION 2:

BEST PRACTICES IN HUMAN RESOURCE ISSUES

2.1 Staffing

- Highly selective hiring practices identify applicants who fit the culture and value system of the organization. The application process for front-line positions is rigorous, taking an average of 6-8 weeks. Applicants are thoroughly screened through written tests, panel and telephone interviews and role-playing scenarios. World-class companies may interview as many as 30 or more applicants for every opening. Front-line workers participate in all aspects of the hiring process, including conducting interviews, screening applicants, instructing, coaching and mentoring new front-line workers. Salaries for front-line workers in industry are comparable with those for government. A high school diploma or college degree, plus some customer service work experience, are the minimum requirements for front-line workers at most world-class organizations.
- At General Electric, prospective employees must endure a rigid selection process. For ease of assimilation and training, the GE Answer Center hires 20-25 representatives at a time. Approximately 600 applicants are screened for the 20 positions. The selection process includes resume review, telephone interviews, personal interviews by peers, testing, profiling, and final interviews. A college degree and excellent communication skills are required for all Customer Representatives. Starting salary is \$20,000 with the potential of earning \$30,000 within about seven years. Turnover rate is 12% per year, with about 50% receiving promotions. Technical Representatives are hired based on field experience and are paid at a considerably higher rate.

2.2 Training

- *Education, Training and Development:* World-class companies embrace a philosophy of continuous training. Training hours are allotted for every front-line worker (ranging from 90-150 hours annually) and are factored into the call demand forecasting and resource scheduling at least one year in advance. Both initial and ongoing training are provided on a just-in-time basis to ensure that the front-line worker receives the most current training possible. Training is based on detailed needs analyses which are linked to achieving the organization's stated mission and vision, as well as strategic goals and objectives. Initial training is aligned with key customer satisfiers, such as courteous and respectful behavior, and empowers the worker to satisfy and even delight the customer. A cadre of front-line workers may also be trained to act as facilitators for cross-functional teams. The curriculum for front-line workers also includes

extensive training on how the overall organization functions so that front-line workers better understand the "big picture".

- *Newcomer's Orientation:* Every organization member, from the new clerk trainee to the head of the organization, receives orientation training in the organization's mission, vision and principles before they start to work at world-class organizations. Members of the senior executive leadership team (the organization's head and direct-reporting executives) personally conduct or participate in all sessions. This shows top leadership's commitment to promoting the organization's quality culture. New workers are fully trained prior to anticipated need dates -- there are typically no human resource shortfalls to contend with.
- *AMEX:* To support American Express' dedication to the growth and development of its employees and the recognition that their training and development are critical, "Quality University" was established within AMEX in 1989 to provide a single framework for all education and training. All employees complete the "core curriculum" within their first 90 days as part of their orientation program. Beyond the "core curriculum", employees attend one of six "schools". For example, new employees with direct customer contact attend the School of Customer Service, a 13 week program consisting of a combination of classroom and on-the-job training. Additionally, all employees must attend 24 hours of training annually.
- *GE:* At GE, new employees participate in an eight week comprehensive training program that includes a thorough orientation of products, interpersonal skills, and sales techniques. Representatives are trained to recognize seven types of personalities that call GE (i.e., direct/natural, pleasant/outgoing, insecure/anxious, confused/uncertain, angry/belligerent, emergency/panic, skeptical/cynical) and adapt immediately to the caller's personality traits. All employees receive approximately 50 hours of training per year with an emphasis on stress management.

2.3 Performance Appraisal

- *Job Standards Tied to Customer Satisfiers:* Customer service, rather than rigid adherence to policies or procedures, is the most important measure of success. Job standards for front-line workers and managers alike reflect a commitment to delighting the customer. Job standards are tied to key customer satisfiers and clearly communicate the extent to which front-line workers are empowered to serve customers. Mixed messages are avoided (e.g., front-line workers are told to take the time needed to satisfy callers and, hence, are not directly evaluated on the average length of the calls they handle). Performance expectations may be documented through a written contract between the team leader and the front-line worker. The contract identifies yearly goals and outlines a course of action the worker intends to take to meet those goals. This process encourages front-line workers to buy-in to the overarching organizational goals and objectives.

2.3.1 Call Monitoring

Call evaluations focus on how effectively front-line workers resolve customer issues, and on how well front-line workers demonstrate professionalism, courtesy and respect for the customer during the call.

- Silent call monitoring techniques are used to assess quality. However, quality assurance "cops" have been replaced by team leader "coaches" who sit with their team members and monitor calls to recognize "success stories" and determine service quality improvement opportunities. Since feedback is immediate and constructive in nature, front-line morale and skill levels have also greatly improved. Team leader "coaches" typically monitor 510 calls for each front-line worker each month. Another purpose of the observation is to identify individual training needs as part of an organization-wide continuous improvement effort. Frequent, regular reports based on information gathered from service observation of telephone calls (i.e., "Quality Tips") are distributed to all front-line workers. Front-line workers receive immediate feedback on ways to improve their call-handling skills, and immediate recognition if superior service has been provided to a caller. Both silent/remote and side-by-side monitoring are used.
- GE's TeleQ is a unique software system that helps supervisors and management improve customer service through internal monitoring and on-line feedback to front-line representatives who are involved with customer service. When doing silent monitoring, the supervisor types a description of the call and general comments into an on-line screen form. Additionally, seven quality criteria are given a "yes" or "no" rating, with space beside each for appropriate comments. After a monitoring session, or "call observation session" as the supervisor prefers to call it, the rep is signalled either on-line or via phone that a session took place. The rep can immediately access and review the on-line evaluation forms by typing a command and inputting a user-identification number.

Seventy percent of GE's rep performance appraisals are based on quality of calls. The seven criteria used by GE on the TeleQ that require "yes" or "no" ratings are: interaction, courtesy, accuracy, needs, features/benefits, agreement, and conclusion. Criteria are pre-assigned weighted scores, so the program automatically tallies a percent score, up to 70%, depending on the "yes" or "no" input by the supervisor. Another benefit of TeleQ is that, at the end of a performance appraisal period, TeleQ will tabulate, on a scale up to 70%, exactly where each rep scored from a quality standpoint. So, in a fraction of a second, TeleQ gives six months worth of subjective information converted to a number needed for a performance appraisal; everything else is 30%, so you can see GE puts a great deal of emphasis on the quality of their calls.

Six quality development specialists at GE Answer Center spend much of their day doing observations and conducting developmental or coaching sessions. Each quality development specialist evaluates and coaches 25 to 30 reps. Silent monitoring is not the only way GE evaluates and coaches reps. Also, supervisors sit down next to the CSRs and do side-by-side monitoring. However, they will only do that if the reps feel comfortable with supervisors sitting next to them. Since calls to the center are taped, one-on-one sessions with the rep and supervisor critiquing a taped conversation is another means of evaluating and developing training needs.

2.3.2 Customer Surveys

Internal and external customer focus groups and short telephone or mail-out customer surveys also provide feedback on the quality levels of the organization and its services. Customer responses to post-call mail and telephone surveys are compared with service observations, shared with the front-line worker who handled the call, and ultimately become part of the front-line worker's performance assessment.

- To ensure usefulness of the information acquired, all surveys are administered or mailed out on the same day the call is handled. Survey timeliness has been found to strongly correlate to the quantity and quality of responses received, and the affected front-line worker's recollection of the instances related to the customer responses.
- *AMEX*: Customer satisfaction is measured through a transaction based survey system of recent customers. This unique system uses numbered surveys (customer pulse cards), color coded by department, which are linked directly to an individual customer service representative and transaction. By using a brief (seven to ten questions) mailer format, AMEX receives about a 25% return rate. Focus groups are used extensively to analyze survey questions and survey results to ensure questions are "actionable" and to identify customer concerns. The dual system of call monitoring and survey feedback links employee performance with customer perceptions. Results of feedback are communicated to customer service representatives weekly, with positive comments providing a basis for performance ratings, awards, and recognition. In addition to tracking timeliness, accuracy, and responsiveness, a customer dissatisfaction index is compiled to identify potential training shortfalls.

2.3.3 Recognition

Numerous recognition and reward incentives (over 45 such approaches at one world-class organization) help to recognize and reinforce desirable work behavior and noteworthy job performance.

- *Outcome-Based Pay Incentives*: A portion of pay for the front-line, support staff and management team is tied to meeting specific call center performance targets for quality and customer satisfaction. Individual worker and management incentives are payable only when the entire center achieves the performance targets. Progress toward meeting the goals is measured daily and reviewed weekly and monthly. Incentives are paid quarterly.
- *Front-line Worker Recognition Programs--Seeking Successes*: Front-line workers are not only recognized for achieving productivity goals, but for delighting customers as well. The most prestigious awards are given for providing exceptional service to customers. Recognition is as consistently applied as performance verification--it is a daily occurrence. Complimentary feedback from customers is shared with all front-line workers and is publicly posted along with the front-line worker's photo on a "wall of fame". Success stories are also shared electronically, in newsletters, and through various other media. Awards are given for high performance ratings received on customer response cards. Frequent on-the-spot recognition from both management and peers is common in world-class organizations, and successful recognition and reward strategies reinforce desired performance for both individual and teams. Front-line workers frequently nominate peers and team leaders for awards. Cross-functional teams typically manage recognition and reward programs, as well as the associated budget allocations.
- *AMEX*: American Express's system to provide awards and recognition consists of a variety of short-term and long-term programs. The short-term program, based on the philosophy of on-the-spot recognition, is decentralized to department level with a variety of rewards such as movie passes and lunches. The long-term program consists of local, national, and worldwide competition for monetary and non-monetary awards, as well as awards for attendance and length of service. Most noteworthy is the "Great Performers" program that recognizes and rewards employees for exceptional customer service. AMEX stresses the importance of employee

empowerment to achieve the level of exceptional customer service. The "Commendable Cardmember Response" program, which provides customers the opportunity to recognize superior service delivery, links desired service to meaningful rewards and recognition.

2.4 Organizational Structure/ Roles

- *Structure:* World-class organizations are flat, with typically no more than three management layers separating the front-line worker from the chief executive officer. Supervisors serve as team leaders; they report directly to the call center manager who, in turn, reports to a direct-report of the chief executive officer. Industry standards average 20-24 front-line workers per team leader.
- *Team Leaders:* Team leaders function as dedicated job coaches, not cops. Team leaders have few administrative duties; their main function is to train, coach and support front-line workers.
- *Fully Dedicated Call Servicing Resources:* Handling incoming calls is the primary and, in many cases, the only function of front-line workers. Other work, such as outbound survey calling, may be performed during occasional idle time periods. The work station operating system automatically switches back and forth, from inbound to outbound calling, to adjust to varying inbound calling demands.
- *Empowered to Resolve Customer Issues:* Front-line workers are empowered to resolve virtually all calls. Front-line workers "own the call" and first-call resolution rates are 85 percent or greater, with customer requested hand-offs accounting for nearly all of the remainder. Front-line workers are expected to take whatever time is necessary to resolve a caller's issues. Individual call handling time is not used for assessment of performance. Monetary write-off authority is high for front-line workers.
- *Management of Customer Dissatisfaction:* A dedicated customer relations team receives and handles complex customer issues and complaints, policy-related issues, and unusual customer requests or special needs that cannot be readily resolved by front-line workers. This is typically a higher-graded, centralized group of problem-resolution specialists. Customers can either access this team directly, or go through an internal transfer. Information on caller complaints is entered into the database system and used to help identify root causes of the problems. The process also includes surveying customers for satisfaction with complaint resolution efforts.
- *Operating Procedures and Other Guidance:* Procedures and guidelines serve as reference materials to help empowered front-line workers effectively resolve customer issues at the initial point of contact. They are not a substitute for the extensive training and experience that allows front-line workers to exercise sound judgment in making decisions and taking actions in the course of providing customer service. Workers are encouraged to err on the side of the customer in unusual situations. Satisfying and even delighting customers is considered more important than rigidly adhering to scripted procedures. Front-line worker recommendations for needed updates to procedures are continuously solicited. All methods, procedures and other reference material are on-line and readily available at each work station. Methods and procedures are updated daily to satisfy front-line worker needs. All information is electronically stored, retrieved and communicated.
- *Participation on Cross-Functional Teams:* Supervisors and managers are continuously evaluated on their effectiveness at soliciting and implementing ideas from front-line workers on how to improve customer service and operational efficiency levels. Teams meet regularly with

team leaders and senior managers to discuss customer concerns and suggest improvements to call center operations, policies, procedures and support systems. Front-line workers participate on cross-functional teams to design, improve or reengineer all aspects of call center operations. An announcement that a team is being formed is communicated directly to front-line workers' work station. Any front-line worker may nominate himself or herself for consideration. Through participation on these teams, front-line workers are able to develop and refine their leadership skills and help breakdown organizational boundaries.

- *Front-Line Worker Suggestions:* Each front-line worker typically interacts with some 25,000 customers per year. An integral part of the continuous improvement process is the free flow of ideas from these key customer-contact personnel. World-class call center operations typically implement over five suggestions per employee per year. Managers at successful call center operations actively solicit front-line workers' advice on how to improve processes at biweekly team meetings, and periodically give the suggestion program added emphasis through recurring suggestion contests and specific promotional campaigns. On-line suggestion systems facilitate the submission of ideas. With on-line systems, suggestion receipt is immediately acknowledged. Suggestors are notified within 24 hours as to who is evaluating their ideas, and receive additional feedback as to the status of their idea on at least a weekly basis. In world-class operations, nearly all suggestions are completely processed within 72 hours.
- *Senior Managers:* Senior managers "shadow" a front-line worker for a day to better understand call operations, job procedures, working conditions and customer expectations. Senior managers also participate in, and frequently lead, new hire orientation training sessions.

2.5 Employee Satisfaction

All world-class organizations work towards achieving employee satisfaction because it results in higher quality performance -- the philosophy that internal service quality (employee satisfaction) translates into external service quality (customer satisfaction). World class companies try to follow the saying "Always treat your employees exactly as you want them to treat your best customers".

- *Worker Well-Being and Satisfaction:* Front-line worker satisfaction is as high a priority within the organization as customer satisfaction. The front-line workers' environment in successful call centers is conducive to providing world-class service. Ergonomically-designed furniture, adequate work space, state-of-the-art work stations and tools and an atmosphere for teaming and personal excellence are all common to world-class call centers.
- *Front-Line Worker Satisfaction Surveys:* Front-line worker satisfaction is measured as routinely as customer satisfaction. Comprehensive annual survey results are compared to specifically targeted weekly and monthly surveys to ensure continuous improvement. In addition to information gathered through team leader meetings, brown-bag luncheons with senior managers and numerous other forums, a dedicated group surveys front-line workers by telephone on a continuous basis. Detailed satisfaction results are communicated monthly to all workers electronically and through newsletters. Action teams are immediately formed to propose solutions to any problems that have been identified through the surveys. Progress toward problem resolution is also closely tracked and similarly communicated to all front-line workers on at least a monthly basis.
- AMEX monitors employee satisfaction through a variety of feedback mechanisms. Although the primary source is periodic surveys, employee feedback is obtained through focus groups,

monthly unit meetings (mandatory for all employees), turnover analysis (about 9% per year), and "EXPRESSLINE". EXPRESSLINE provides employees with the opportunity to have work-related questions, concerns, problems, or opinions addressed by senior management. EXPRESSLINE forms are located throughout the facility and the program coordinator insures a response is prepared within 15 days.

SECTION 3: BEST PRACTICES IN TECHNOLOGY

Call center technology is consistently recognized as a top business imperative for achieving front-line worker and customer satisfaction, reducing costs, and reinforcing management's commitment to maintaining a quality culture. Technology enhancements are continuously explored to improve productivity and the ability of front-line workers to respond to changing customer demands for more services and better service performance. The transition to new systems is accomplished so smoothly that the effort is transparent to customers.

3.1 Automated Attendants & Voice Response Units

- Automated Attendants (AA) and Voice Response Units (VRU) automatically answer the call and direct the caller to the desired place. VRUs answer the phone, route calls, and access host computer databases, wherever they reside, to give real time information to customers, suppliers, and employees. With voice response, callers can have unique information read back to them, faxed directly to them or compared with other information on the database. Unlike a VRU, an AA has no "brains" to access a host computer. An AA simply informs callers about what to dial to arrive at the desired destination. For both a VRU and an AA, the information is delivered to the caller via pre-recorded greetings.
- *Incoming Call Flow:* All callers are offered a choice of automated or live customer service. Companies screen incoming calls by prompting callers to choose from a limited number of options, and calls are directed accordingly. The number of options per level is limited to *five* choices or fewer. Voice recognition is used to ensure that callers with rotary telephones receive a level of service equal to that of touchtone callers. Trunking and resources are sized to allow a limited queue of 15-20 seconds and virtually no busy signals. Live customer service is available 24-hours a day.
- *Call Transfers:* Internal call transfers from one front-line worker to another are rarely made because front-line workers answering the calls are empowered to take the actions needed to satisfy the customers' issues, and because incoming calls are automatically gated to appropriately skilled front-line workers. When it is necessary to hand a call off to another front-line worker, it is done by direct (seamless) transfer. The transferring agent introduces the caller and shares all known information so that the customer does not have to repeat information. Customer information is transferred along with the call. Transferred callers are never gated to a second queue.
- *FPL:* Florida Power & Light has invested considerable resources in the development of their Voice Response Unit. Extensive preliminary market research by FPL using focus groups and

telephone surveys concluded that most customers are receptive to the concept of automated telephone systems (they won't hang up), 15% of all callers automatically opt for a "human" response, well educated people prefer VRUs, senior citizens (predominate in Florida) are receptive to learning the VRU, and users often need a reminder to know where they are (i.e., which options they have selected so far) in the process.

Also, FPL utilized focus groups in the area of voice research to evaluate and determine preferred voice attributes (tone, rate, pitch) for the voice to be used in the VRU, or the "Voice of FPL" from a customer's point of view. FPL found that the preferred voice attributes have a definite impact on customers' perceptions of service.

FPL extensively tested their VRU scripting prior to implementation. They had focus groups with randomly picked customers go through the IVRS scripting with speakerphones, even videotaping the customers to see facial responses to the scripting. Their VRU script is exactly the same at all four call centers, with the same voice as well.

- On the other hand, GE has been reluctant to use voice response systems in call handling. They believe voice response systems would counter the primary call center goal of building customer loyalty and goodwill through friendly personal contact.

3.2 Call Distribution Systems

- *Automatic Call Distribution (ACD):* ACD system efficiently handles a large volume of incoming calls by distributing them equitably among a designated group of answering positions. With an ACD, a directory number is assigned to a group of answering positions rather than to a single line. The ACD system queues the positions so that the first incoming call to the directory number is presented to the agent who has been idle the longest. If all agents are busy with calls, calls are queued and answered in the order of arrival.
- Just as importantly as distributing the calls, the ACD provides statistical management reports on all facets of the call centers' activity as well as dynamic on-screen status reports on agent, group, and system activity. These statistics include number of calls, call lengths, after call work time, the number of calls abandoned before they reach an agent, the total amount of talk time and call wait time, and other measures for the call group. The information is used to help improve customer service and internal forecasting, not to criticize the front-line workers.
- *Contingency Operations:* On very rare occasions when immediate demand exceeds available resources, and the queue exceeds 180 seconds, the automatic call distributor (ACD) manages the length of queue and generates busy signals. Research indicates that customers prefer a busy signal over an inordinately lengthy queue. Use of the ACD to generate busy signals is an emergency measure taken in response to a forecasting failure; it is not a routine action.
- At FPL, calls are processed through ACDs at each of their four Centers. Additionally, the ACDs are networked, which allows calls to be distributed to available agents throughout the network vice within an individual Center. As other companies are, FPL is seriously considering going to a "network ACD" approach, where a commercial carrier like MCI or AT&T owns the ACD hardware, and the user does not have to spend vast amounts of money to acquire equipment that is quickly outdated. Agent availability is monitored in real time by a network administrator who routes calls to groups of available agents over internal and external telecommunications networks. Using "TeleCenter System" workforce management software,

FPL can accurately forecast, down to half-hourly intervals, call volumes for each center and effectively schedule the workforce to match the workload.

3.3 Desktop Information

- Call centers use on-line computer information systems to enable front-line workers to answer customer inquiries quickly and effectively. Desktop information services include databases to retrieve information and on-line procedures manuals. On-line procedures manuals are often built into the database applications using a "help screen" format or a sequence of prompts that walks the front-line worker through each step in the call answering process. On-line procedures significantly reduce the number of pages or procedures necessary, and increase accessibility, speed of access, and ease of use of information.
- Successful desktop information systems: are updated daily; do not use coded information; offer sub-second information access times, easy to use interfaces, and built-in procedural information and templates for gathering data in applications; and minimize the number of keystroke entries required from front-line workers. As many as 18 simultaneous applications may be running on one such fielded system.
- Graphical user interfaces are used to reduce front-line worker training requirements, application time, and keystrokes as compared to non-graphical interfaces. They also help to improve information access time and accuracy, thereby enhancing customer service.
- A unique program developed by FPL is a database called "DSAT", which is used to track and follow up with dissatisfied customers. Customer service agents are empowered to determine if a caller is dissatisfied, and if so, they then enter the appropriate information (type of call, comments, dissatisfaction driver, etc.) into the DSAT database. DSAT information is then transferred to customer relations for follow up and analysis to identify emerging issues (i.e., high DSAT trends indicate management action is needed). An example of the value of the system was where the billing department developed a high trend of DSAT calls. After in-depth research and follow-up with these complaining customers, FPL reengineered their billing process, making it simpler and easier to understand. The result was considerably less DSAT calls in reference to billing.

3.4 Informative Queuing

- Callers waiting in the queue are provided with information as to the expected length of delay, allowing them to choose whether to stay in queue or hang up. Typically, these estimates are overstated so that impatient callers are not subjected to the further aggravation of being on hold beyond the estimated queue time.
- FPL has developed an innovative informative queuing application called "SMART QUEUE", that activates when hold times exceed predetermined limits. "SMART QUEUE" calculates the average time you can expect to be on hold before a service representative answers the phone, and the number of calls ahead of you, then tells you that information while you are on hold. SMART QUEUE applies a mathematical formula to the actual hold times, and then announces the result to the caller on hold. This formula takes into account customer tendencies to misjudge actual hold times, i.e., people perceive that they have been on hold for two minutes when in reality, it has been 30 seconds. FPL found that customers, when informed of the average wait time with SMART QUEUE, are willing to wait longer without being dissatisfied.

3.5 Other Call Center Technology

- *Real-Time Information Exchange and Retrieval:* Send and receive fax servers allow front-line workers to transact with the customer in real time. Imaging systems allow front-line workers to access information quickly, even though it may be in a document that was received in paper form, such as an incoming letter from a customer or an archived transaction history. National Technical Information Service (NTIS) has such an imaging system to store and retrieve all paper customer transactions.
- *Automatic Number Identification (ANI):* This technology serves to identify the caller, link the call to the customer's record, and populate the call center representatives' screen with customer information, all of which occurs before the call is answered by the representative. Incoming calls are passed to the host computer, which uses the Automatic Number Identification (ANI) information to locate the caller's data file and databases of customer preferences and buying patterns. The CSR can immediately handle the customer's request because the account information instantly appears on the screen and lets repeat customers feel comfortable that the agent is familiar with the account. Ordering is easier, problems are solved faster and agent efficiency is increased.
- *Headsets:* High-quality headsets are utilized by front-line workers to improve their freedom of motion and reduce fatigue.

SECTION 4:

BEST PRACTICES IN PERFORMANCE MEASURES

4.1 Key Measures

Key measures include quantitative and qualitative measures. Both are used to predict customer satisfaction rates. Actual customer satisfaction rates, as indicated by the customer are, however, the central focus. Productivity and efficiency measures are focused on effective use of staff, technology, and other assets, along with employee satisfaction (considered a primary predictor of productivity and efficiency). Measures are continuously compared to industry data, including industry average, best competitor, and appropriate benchmarks.

- *Customer Access is Paramount:* Access to the call center and its services is the organization's top priority and is reflected in such key call center measures as 24 hour availability, a 15-second maximum queue time, and a 2 percent maximum abandoned call rate. The typical busy-out performance standard is "zero instances." Effective capacity planning, forecasting and resource allocation are pivotal to meeting customer access requirements.
- *Customer demographics:* Demographic data is gathered and assessed to determine service levels for all major customer groups. Information on trends is provided to managers and employees so they will be able to service the various customer groups more effectively. Customer service is not considered a "one size fits all" business. Services are tailored to meet varying customer requirements.
- *Customer-Driven Performance Measures:* Measures of information and support systems effectiveness are derived from front-line worker and customer satisfaction data and direct feedback. For example, the 15-second Average Speed of Answering (ASA) performance standard typically seen at world-class organizations is based on in-depth studies and analyses of customer behavior and satisfaction data. Customer queue time approaching one minute is universally associated with unacceptable levels of customer service, and is strongly correlated to lost business, lost opportunities and high levels of customer dissatisfaction. Customer satisfaction data help determine the key customer service measures that, in turn, drive the information management standards. The key information management standards are: accurate and timely access to information for front-line workers and their customers; information system reliability (typically over 99.9 percent); timeliness of database update (typically less than 24 hours); and ease of use of front-line work stations.

- *Dynamic Performance Measures:* As performance goals are achieved, increasingly higher goals are identified. At one world-class organization, the "ten most wanted" process improvements are identified, along with quantitative performance increases. Cross-functional teams work to improve performance. Once improvements yield a stable, high-performance process, it is "retired" from the list. Front-line workers are provided key performance measures on a daily or weekly basis in order to gauge their own progress in continuous improvement.
 - *Predictive Quantitative Measures:* Key quantitative measures used to predict customer satisfaction levels are shown below, along with the high norm group performance levels.
 - ⇒ Average speed of answer: less than 15 seconds
 - ⇒ Abandoned call rate: less than 2 percent
 - ⇒ Busy rate: less than 1 percent
 - ⇒ Service level (total calls less busy signals and abandoned calls): 98 percent
 - ⇒ First call resolution (one agent/no transfers): 85 percent resolution
 - *Predictive Qualitative Measures:* Predictive qualitative measures were focused on services provided by front-line employees. Measures include courtesy, initiative, accuracy and completeness. The primary technique used to gauge qualitative predictors is call monitoring.
 - *Customer Satisfaction Rates:* Techniques for assessing satisfaction include:
 - ⇒ Random survey (while customer is on the line)
 - ⇒ Call-back survey
 - ⇒ Call-forward survey (customer transferred/asked to stay on the line)
 - ⇒ Mailing
- Customer satisfaction rates derived from call monitoring is analyzed for trends.
- *Productivity and Efficiency Measures:* Effective use of assets is measured by:
 - ⇒ Occupancy rate (number of employees answering calls)
 - ⇒ Agent availability (time answering customer calls)
 - ⇒ Cost per call
 - ⇒ Personal and average call center answer rates
 - ⇒ Information systems availability (99.999 percent ranked in at high norm).

Measures such as "after call work time" or "keystroke time" are not primary measures. Rather, they may be enablers to agent availability or other measures. For example, reducing the number of front line agent keystrokes needed to close a call may increase the availability of the agents. Similarly, information systems management measures support more direct measures of business results. For example, timely update of information systems support the worker's ability to provide accurate answers to customer inquiries.

- *Extensive Surveying Activity:* Customers are surveyed constantly to determine satisfaction levels for existing services and requests for new services. Surveys are used to measure system accessibility, front-line professionalism, and overall customer satisfaction with the way their calls are handled. Customer focus groups are also used to determine the needs of specific customer groups and how well those needs are being met. Mail and telephone customer surveys are conducted to assess the level of customer satisfaction with specific transactions. Telephone surveys are typically made within 48 hours of the completed customer contact. Mail surveys are automatically sent to customers within 24 hours for those calls that have been monitored. The results from these surveys are shared with call center support personnel and front-line workers.

4.2 Forecasting and Scheduling

- *Resource Allocation Strategies:* Various off-the-shelf forecasting tools allow call center managers to make highly effective use of front-line workers to maintain high service quality levels despite cyclical or changing customer demand levels. Continuous evaluations of key performance indicators help to ensure the appropriate alignment of resource allocations with planning objectives.
- Call demand is forecast 12-18 months in the future and adjusted quarterly, monthly, weekly. Resource scheduling involves the determination of all front-line worker leave schedules, work shifts, and new hiring requirements, and is accomplished in accordance with the projected demand for service. Tours of duty are determined by the scheduling system. Multiple sites are scheduled as a single unit. Training is scheduled around the forecasted demand. Established 8-hour or 10-hour work schedules, staggered by 15-minute start time intervals, are assigned by seniority. Bidding for new schedules occurs at regular intervals, at least twice a year. There are no flextime schedules.
- *Proactive Solutions to Peak Calling Periods:* A variety of methods are used to plan for and deal with peak call volumes. They include call avoidance techniques, voice response unit messages designed to address peak period questions, front-line worker augmentation contingency plans, voluntary or mandatory work schedules or overtime, the postponement of training or leave during forecasted or actual peak periods, and the acquisition of sufficient additional circuit and equipment capacity.
- *Full-Spectrum Capacity Management:* Information from a broad spectrum of sources, such as new product development, service problem resolution and prevention efforts, customer market segmentation (who calls and how often), press releases or media campaign plans, and historical statistics on the types of calls answered are key to effective capacity planning. Information from all of these sources is provided in a user-friendly format to front-line workers and call center managers so that they can anticipate and meet changing customer service needs.
- *Key Call Avoidance Concepts:* Call avoidance strategies, such as finding out which customers call most frequently and why, play a major role in capacity planning and the handling of peak loads. For example, a large number of callers from one customer group might frequently complain about a particular service. Rather than add more staff, equipment and circuits to handle the large number of callers, the most cost-effective solution might be to eliminate the cause of the complaints, and therefore the calls. Another call avoidance strategy involves the use of such alternate media as on demand fax or information systems, which allow customers to electronically retrieve certain documents and information quickly, 24 hours a day, and without talking to a front-line worker.

SECTION 5

RECOMMENDATIONS

The benchmarking team makes the following general recommendations to improve DTIC's telephone customer service.

5.1 Human Resource Issues

- *Employ the right people.* Identify positions in DTIC that routinely perform customer service over the telephone. For these positions, place emphasis on employing personnel who have attitudes and personalities that predispose them to serve customers well. Develop hiring plans to ensure identification of applicants who fit the service culture and value system of the organization. Current employees not possessing these attributes need retraining or reassignment.
- *Train customer service employees.* Provide initial and ongoing training to increase and maintain a high level of teleservice. It is recommended that DTIC hire people with positive attitudes and then train them in the philosophies of the service culture. The objective is to train all personnel involved in teleservice in methods and techniques of resolving customer problems in a courteous, professional manner. New employees need mandatory training before they answer a phone.
- *Develop teleservice leadership.* Establish a leadership position to provide in-house expertise in teleservice. The position will serve as a focal point for organizational improvements in teleservice. A function of this position would be to monitor representatives calls to reinforce positive behavior and determine additional training needs.
- *Customer service skills in the performance rating.* Rewrite position descriptions and performance appraisals to include customer service skills that focus on improving customer satisfaction.

5.2 Technological Issues

The benchmarking team evaluated call distribution systems. Harris Corporation (Ft. Belvoir telecommunication contractor) offers a uniform call distribution (UCD) system as an option available to DTIC. Like an ACD, UCDs distribute incoming calls among a designated group of answering positions. Unlike an ACD, a UCD queues positions so that the first incoming call is

presented to the agent who has taken the least *number* of calls. A UCD attempts to give each agent the same (uniform) *number* of calls. It does not take into account the length of calls or agent idle time. Consequently, UCDs penalize individuals requiring an above average amount of time to satisfy the caller. For example, if a call requires an hour to complete, the CSR will fall behind others in calls handled that day. As a result, calls will be routed to that individual until the number of calls processed are equal with the group. In addition, UCDs have limited management report capability. UCDs report statistics at the group level, and not at the agent level. Therefore, the supervisor has no way of determining the efficiency and effectiveness of any individual, but only a summary of what the entire group is doing. Also, UCD's reports are not available in real time, but only in batch mode.

- The team recommends that DTIC initially request uniform call distribution service from Harris at Ft. Belvoir but initiate procurement action for an automatic call distribution system. The UCD option is available to DTIC at no cost and can be implemented upon arrival at Ft. Belvoir. Request UCD service for at least DTIC-BR, Reference and Retrieval Services and DTIC-BCS, Registration. Ultimately, it is recommended that DTIC procure an automatic call distribution (ACD) system to efficiently and equitably route calls to CSRs and provide management information in real time.

The benchmarking team obtained a cost estimate from Executone Information Systems, Inc., for their ACD system. Executone proposed a phone solution sized for 15 agents in DTIC-BR, Reference and Retrieval Services, consisting of Executone's Integrated Digital System with software Automated Attendant, Advanced Automatic Call Distributor, voice mail software, and digital display telephones at a total cost of \$38 K (excluding Harris overhead fee). The Executone equipment is modular, and therefore easy to expand or upgrade. Additional areas could be added to the ACD system in the future. Executone was contacted after visiting the National Technical Information Service's (NTIS) phone operation that used an Executone ACD system. Upon installation of their ACD, NTIS achieved a dramatic reduction of dropped calls and subsequent drop in customer complaints.

- Input the DTIC Conversation Record Forms into an online database vice the current manual forms. Currently, the records have little value since they are disposed of every few months. The team envisions the conversation records as being a feed into the proposed DTIC marketing information system.
- It is recommended that the pre-recorded messages on the 1-800 CAL-DTIC number and other voice mail messages throughout DTIC be redesigned. The development of the pre-recorded messages and subsequent call routing must be customer driven in their development. The design should follow such principles as limiting the number of options per menu level to 5. Currently, the incoming calls via the 1-800-CAL- are greeted with seven choices. The scripting should be extensively tested prior to implementation.

5.3 Performance Measures

Establish precise and demanding performance standards as follows:

- Develop, report, and monitor key *quantitative* measures used to predict customer satisfaction levels such as: average speed of answer, abandoned call rates, busy rates, and set goals to satisfy our customers.

- Develop, report, and monitor key *qualitative* measures used to focus on services provided by front-line employees. Measures include employee courtesy, initiative, accuracy and completeness of transactions. The primary technique used to gauge qualitative predictors is call monitoring.
- Develop, report, and monitor customer satisfaction with teleservice. Techniques for assessing satisfaction include: focus groups, caller surveys, comment cards and telephone recontact programs to solicit their opinions on our service.
- Develop, report, and monitor productivity and efficiency measures of the teleservice operation. Effective use of assets is measured by: occupancy rate, agent availability, and personal and average call center answer rates.